

Claims

- [c1] 1.A method of accessing a device connected to a local area network (LAN) with a remote apparatus, the method comprising:
- providing a router to control data traffic received and transmitted by the LAN, the router being assigned a public internet protocol (IP) address for communicating with an external network;
 - monitoring the LAN for messages indicating that devices have been connected to the LAN;
 - determining a public port number for each device connected to the LAN;
 - generating a portal web page, the portal web page containing a list of each device connected to the LAN and a link to each device, the link containing information indicating the corresponding public port number for each device;
 - visiting the public IP address of the router with the remote apparatus and viewing the portal web page with a web browser on the remote apparatus;
 - selecting a device from the list of devices displayed on the portal web page; and
 - accessing the selected device with the remote apparatus

by reading the public port number corresponding to the selected device, appending the public port number to the public IP address of the router to form a public device address, and visiting the public device address.

- [c2] 2.The method of claim 1 wherein the public device address comprises the public IP address and the public port number of the selected device separated by a colon character.
- [c3] 3.The method of claim 1 wherein only a single mouse click is needed for selecting the device from the list of devices displayed on the portal web page.
- [c4] 4.The method of claim 1 wherein a login password is required to access the portal web page.
- [c5] 5.The method of claim 1 wherein a login password is required to access the selected device.
- [c6] 6.The method of claim 1 wherein the selected device is an internet appliance.
- [c7] 7.The method of claim 1 wherein the selected device is a network camera.
- [c8] 8.The method of claim 1 wherein the remote apparatus is located outside the LAN on a different domain from the selected device.

- [c9] 9.The method of claim 8 wherein the remote apparatus accesses the selected device via the Internet.
- [c10] 10.The method of claim 1 wherein the remote apparatus is located inside the same LAN as the selected device.
- [c11] 11.The method of claim 1 wherein monitoring the LAN for messages indicating that devices have been connected to the LAN is performed according to the Universal Plug and Play (UPnP) protocol or the Simple Control Protocol (SCP).
- [c12] 12.A method of accessing a device connected to a local area network (LAN) with a remote apparatus, the method comprising:
providing a router to control data traffic received and transmitted by the LAN, the router being assigned a public internet protocol (IP) address for communicating with an external network;
consulting a forwarding table stored in the router to determine a private IP address and a corresponding public port number for each device connected to the LAN;
generating a portal web page with the router, the portal web page of the router containing a list of each device connected to the LAN and a link to each device, the link containing information indicating the corresponding

public port number for each device;
visiting the public IP address of the router with the remote apparatus and viewing the portal web page of the router with a web browser on the remote apparatus;
selecting a device from the list of devices displayed on the portal web page of the router; and
accessing the selected device with the remote apparatus by reading the public port number corresponding to the selected device, appending the public port number to the public IP address of the router to form a public device address, and visiting the public device address.

[c13] 13.The method of claim 12 wherein the public device address comprises the public IP address and the public port number of the selected device separated by a colon character.

[c14] 14.The method of claim 12 wherein only a single mouse click is needed for selecting the device from the list of devices displayed on the portal web page of the router.

[c15] 15.The method of claim 12 wherein a login password is required to access the portal web page of the router.

[c16] 16.The method of claim 12 wherein a login password is required to access the selected device.

[c17] 17.The method of claim 12 wherein the selected device

is an internet appliance.

- [c18] 18.The method of claim 12 wherein the selected device is a network camera.
- [c19] 19.The method of claim 12 wherein the remote apparatus is located outside the LAN on a different domain from the selected device.
- [c20] 20.The method of claim 19 wherein the remote apparatus accesses the selected device via the Internet.
- [c21] 21.The method of claim 12 wherein the remote apparatus is located inside the same LAN as the selected device.